

ABSTRACT

A wireless digital communication system includes a base station in communication with a plurality of user equipment mobile terminals (UEs). The system prioritizes the forwarding of blocks of downlink data to designated ones of the UEs. The system employs adaptive modulation and coding (AM&C) to achieve improved radio resource utilization and provides optimum data rates for user services. Blocks of downlink (DL) data are received by the base station which requests downlink (DL) channel quality measurements only from those mobile terminals (UEs) with pending downlink transmissions. The UEs respond to the request by measuring and reporting DL channel quality to the base station, which then allocates resources such that the UEs will make best use of radio resources. The base station notifies the UEs of the physical channel allocation indicating the modulation/coding rate and allocated slots followed by transmission of blocks of downlink data which are transmitted to the UEs.